

Patent Application of

Carol G. Lilly

for

Wall Art for Concealing a Recessed Cabinet

Field of Invention

The present invention relates to decorative covers, releasable latch slide assemblies, and recessed wall cabinets.

Background of the Invention

Modern home decorating requires keeping audio-video equipment within easy reach, and yet neatly out of view when not in use. Usually a door or hinged cover is used to conceal the wall opening of the recessed cabinet. At times it is desirable to be able to completely remove the cover from the supporting structure.

The present invention provides several advantages not described in the prior art, namely:

- 1) Quickly and easily remove and then re-connect the decorative cover to the supporting structure.
- 2) Decorative Cover has longitudinal movement and extends and retracts between the fully extended and fully retracted positions.
- 3) Decorative cover conceals longitudinal movement capabilities when in full retracted (closed) position.
- 4) Slide assembly connected to the decorative cover is relatively silent during operation.
- 5) Cover provides a decorative appearance in the fully extended, and fully retracted positions, and all intermediate positions.

Allmand in US 3,918,782, and Orlewicz in US 4,155,608 show recessed cabinets with covers that resemble framed pictures. The covers are hinged to the wall, and suffer the disadvantages of being: unconvincing in concealment, noisy during operation, unsightly in the open position, and inconvenient to remove from the supporting structure.

Parvin in US 5,002,402, teaches the design and operation of an unhandled side latch device in the application of a drawer slide. Specifically, where the stationary slide member is fastened to a drawer housing, and the load-carrying slide member is fastened to the drawer. Other applications, such as, wall art for concealing a recessed cabinet are not mentioned.

Brief Summary of Invention

The present invention comprises a decorative cover for a recessed cabinet adapted to be coupled to a releasable slide assembly. The decorative cover is an artistically framed picture, or mirror that provides unobvious movement in the longitudinal direction.

Preferably, the recessed cabinet contains audio-video equipment. A television cabinet particularly for homes is often recessed into a wall and has provisions for connections to audio-video components as well as electrical power.

To disconnect the load-carrying slide member from the intermediate slide member, it is only necessary for the user to depress the latch device. Moving it in either direction, clockwise or counterclockwise to the point where the normally abutting faces will have clearance and will permit the slide members to be separated completely.

Preferably, the latch device incorporated in the slide assembly should be capable of being disengaged by movement in either direction; it should not be necessary to move the left slide latch device in one direction and the right slide latch device in the opposite direction, for such a requirement has been found to so challenge the inexperienced or occasional operator that they will usually not be successful in disconnection of one slide member from the other.

Because the latching elements are preferably are made of a plastic material, instead of a metallic material, the click of a metal contact is avoided, which would be objectionable in many slide applications.

To reattach the slide members, it is only necessary to insert the load-carrying member into the intermediate member, then push the two member into a closed position. As they move toward a closed position, the inclined faces will engage and permit the slide members to continue their travel and be completely nested, one in the other.

The decorative cover is convincing in concealment, visually appealing in the open and closed positions, and easily removed from the slide assembly.

Further objects and advantages of the invention will become apparent from a consideration of the drawings and ensuing description.

Brief Description of the Drawings

Fig. 1: Front view of Decorative cover in closed position, and mounted on Wall.

Fig. 2: Front view of Decorative cover and recessed cabinet in Open position and mounted on Wall

Fig. 3: Front view of Recessed Cabinet with Decorative cover removed.

Fig. 4: Front view of Releasable slides assembly.

Fig. 5: Cross sectional view of Releasable slide assembly.

Fig. 6: Rear view of Decorative cover after removal from Wall.

Detailed Description of the Invention

Releasable slide assemblies are adapted to be coupled to an artistically framed picture, or mirror, thereby effectively concealing a recessed cabinet, and providing unobvious movement in longitudinal direction. The preferred releasable slide assembly consists of three elements, attached to inter-fitting longitudinally movable members in a relationship to pass adjacent to one another.

This invention provides several advantages not described in the prior art, namely:

- Quickly and easily remove the decorative cover from the supporting structure by the inexperienced operator.
- Quickly and easily re-connect the decorative cover to the supporting structure by the inexperienced operator.
- Decorative Cover has longitudinal movement and extends and retracts between the fully extended and fully retracted positions.
- Decorative cover conceals longitudinal movement capabilities when in fully retracted (closed) position.
- Slide assembly is relatively silent during operation.
- Cover provides a decorative appearance in the fully extended, and fully retracted positions, and all intermediate positions.

Every recessed cabinet will have a wall opening. The recessed cabinet is usually of a rectangular cube shape and is preferably used to store audio-video equipment.

The audio video equipment dimensions predetermine the size of the cabinet depth and wall opening, as well as, the decorative cover.

The outer cover is placed directly in front of the wall opening, and has the outward appearance of a decorative wall article such as a framed picture or mirror.

The framed picture or mirror has at least two sides, which can be described as: a decorated and an undecorated side. The framed picture or mirror has least two dimensions which can be described as: longitudinal and vertical. The vertical dimension is parallel to the plane of the wall, while the longitudinal dimension is perpendicular to the vertical dimension. The undecorated side comprises at least two mounting beams mounted to the frame and is fastened using nails or screws and is installed in the longitudinal dimension. The mounting beams are typically wooden studs. The frame is required on the picture or mirror for decoration, and for supporting the mounting beams.

At least two telescoping slide assemblies are sandwiched between the decorative wall article and the wall. The slide assemblies facilitate longitudinal movement for the framed picture or mirror. The assemblies are located above and below the wall opening, and parallel to each other, and the mounting beams on the framed picture or mirror.

The slide assemblies are interconnected load-carrying, intermediate, and stationary slides movable relative to one another. The load carrying and intermediate slides move relative to the stationary slide and extend and retract between the fully extended and fully retracted positions.

The stationary slide is fastened to wall using screws or nails. The load-carrying slide is detached from the intermediate slide, and permanently secured to the mounting beam on the undecorated side of the framed picture or mirror in the longitudinal dimension.

Each member of the slide assembly incorporates a stop or latch that is aligned with a corresponding stop or latch on the adjacent member to limit travel of the load-carrying, intermediate, and stationary members relative to one another, thereby preventing the framed mirror from being unintentionally removed from the wall.

In certain applications, it is desirable to be able to remove the framed mirror from the slide assembly. Possible reasons include: 1) addition of audio video equipment to recessed cabinet, 2) removal of audio video equipment from recessed cabinet, 3) cleaning of framed picture or mirror surface, or 4) replacement of framed mirror to framed artwork or vice versa. This in turn requires the slide assembly to contain cooperating latches that can be selectively disengaged. The latch device incorporated in the slide assembly should be capable of being disengaged by movement in either direction; it should not be necessary to move the left slide latch device in one direction and the right slide latch device in the opposite direction, for such a requirement has been found to so challenge the inexperienced or occasional operator that they will usually not be successful in effected disconnection of one slide member from the other.

Because the latching elements are preferably made of a plastic material, instead of a metallic material, the click of a metal contact is avoided, which would be objectionable in many slide applications.

To disconnect the load-carrying slide member from the intermediate slide member, it is only necessary for the user to depress the release latch. Moving it in either direction, clockwise or counterclockwise to the point where the normally abutting faces will have clearance and will permit the slide members to be separated completely.

To reattach the slide members, it is only necessary to insert the load-carrying member into the intermediate member, then push the two member into a closed position. As they move toward a closed position, the inclined faces will engage and permit the slide members to continue their travel and be completely nested, one in the other.

A wall mounted decorative cover, **15** is convincing in concealment, and visually appealing in the closed position as shown in Fig. 1. Furthermore, a decorative cover, **15** is visually appealing in the open position, as shown in Fig. 2.

A framed mirror, **15** will be used as an example of a decorative cover to describe the invention. Audio-video equipment: **25**, **32**, and **34** will be used as examples of the recessed cabinet, **36** contents. However, it is clearly understood that the decorative cover, or recessed cabinet content choices are not limited by these illustrations and examples.

In Fig. 2, and 3, the upper and lower wall member, **20**, and intermediate slide members **30** are displayed. A recessed cabinet **36** contains the television, **25**, the DVD (digital video disk) player, **32**, and VCR (video cassette recorder), **34**. A mirror mounted slide member, **40** is concealed in this frontal view.

A complete slide assembly itself, **7** is shown in Fig. 4, and 5. Releasable slide assemblies are commercially available from manufacturers, such as, Accuride International Inc. (Sante Fe Springs, CA.), and detailed in US Patent 5,002,402, and 6,416,145 B1, which are incorporated herein by reference.

The slide assemblies come in a wide range of load ratings (150 to 500 lbs), and travel lengths (10 to 60 inches). Based upon the weight of the decorative cover, and dimensions of the recessed wall cabinet, the proper slide assembly can be determined.

The materials of construction are: Slide members (cold roll steel), Ball bearings (Carburized steel), and Ball retainers (Polymer). These materials facilitate the assemblies' ability to operate under heavy loads, at extensive travel lengths, and still remain relatively silent.

In general, slide assemblies consist of an outer, or wall member, **20** that receive an intermediate member **30** which in turn supports an inner or mirror member **40**.

The members of the slide assembly preferably ride over one another on ball bearing assemblies **50**.

A release latch **35** is a component of the mirror member **40**, and facilitates easy removal from the slide assembly.

Screws attach the outer member, **20** or other suitable device to the wall **10**, while the inner member, **40** is attached to the mirror **15**. When the mirror is moved relative to the wall, both the inner and intermediate members move relative to one another in the longitudinal direction.

In Fig. 6, a mirror member, **40**, and a release latch, **35**, are mounted on a wooden stud, **60**, mounted on the rear of the framed mirror.

Example:

A 32 inch diagonal television is placed into a recessed cabinet with dimensions: 34 inch longitudinal, 32.5 inches vertically, and 24 inches depth. The cabinet contains two electric receptacles, each accepting a three prong plug. Adequate vertical space remains to include several additional audio-video components within the recessed cabinet. A video cassette recorder, and a digital video disk player can be stacked on top of the television and still be less than the 32.5 inch vertical limit. The slide assemblies are 27 inches fully retracted, and 54 inches fully extended, and were purchased from Accuride International Inc. (Sante Fe Springs, CA.). The framed mirror is 36.5 inches longitudinally, and 54 inches vertically. The mounting beams are constructed of wood, and measure: 0.75 inch thick, 3.5 inches vertical, and 35 inches longitudinal. The curved portion of the framed mirror has an 18.5 inch radius. If an imaginary center line is drawn longitudinally through the stationary slide members, the vertical separation distance is 34.5 inches. If an imaginary center line is drawn longitudinally through the load-carrying slide members, the vertical separation distance is 34.5 inches.

Although the present invention has been described and illustrated in detail, it is clearly understood that the same is by way of illustration and example only and is not to be taken by way of limitation; the spirit and scope of the present invention being limited only in terms of the appended claims.